We will not be ignored!

Addressing the Health Gaps in the Deaf Community in Michigan

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Background: Deaf and Hard of Hearing Population

- The deaf and hard of hearing community is often seen as three groups:
  1. Deaf (Please note the capital "D")
  2. deaf (Please note the lowercase "d")
  3. Hard of Hearing
- Deaf American Sign Language Users
  - A language and cultural minority population
  - Significant social marginalization and barriers

Background on Deaf Michiganders

- ~1 million Deaf ASL users in the US (*Mitchell et al. 2006)*
- ~866,879 Michiganders with hearing loss (*Division on Deaf, Deafblind, Hard of Hearing, 2005)*
  - ~90,720 from that group are Deaf
- Why focus on Deaf ASL users?
  - Mental Health
  - Health Information
  - Health Care Navigation
  - Health Outcomes

Key Differences (Deaf vs other limited English proficiency groups)

Similarities	Differences
Social • Use of a non-English language • Socialize and preferentially within community • Socio-cultural norms different than those of the majority community • Children often become bicultural/bilingual	Expectations Unlike members of other language minorities: • Deaf are expected to have fluency in written English • Many Deaf are expected to and communicate with their physicians by note-writing in English • Many Deaf are expected to and communicate with their physicians by speech-reading in English
Healthcare • Infrequently encounter a doctor from their own cultural group) • Language differences and health knowledge limitations are often barriers to appropriate healthcare • Poorer health than the general population • Less likely to visit a physician than the general population	Cultural Transmission • Deaf culture and American Sign Language (ASL) are usually transmitted horizontally (from peers) rather than vertically (from parents)
Opportunity • Lower education level, socioeconomic status, and literacy than the general population • Limited access to English language-based information	Legal • Guidelines for healthcare communication with Deaf come from the Department of Justice • Guidelines for healthcare communication with others who have low English proficiency come from the Department of Health & Human Services

Adapted from Barnett, *Family Medicine* 1999 and Steinberg, et al, *Journal of General Internal Medicine* 2006

Deaf Mental Health

- ~2% of Deaf with mental health issues get the necessary mental health treatment (*Basil, 2000*)
- Lack of accessible mental health programs
  - Language and cultural concordance is critical!
  - Medical mistrust and medical misdiagnoses is prevalent
- Higher rates of mental health conditions than the general population (*Fellinger et al., 2012*)
  - Depression
  - Anxiety
  - Abuse (sexual, interpersonal violence, substance)

Abuse in the Deaf Population

- 90% of all Deaf children experience abuse
- 54% of deaf boys fall victim to sexual abuse compared to 9% of hearing boys
- 50% deaf girls are victims of sexual crimes compared to 25% of hearing girls.

Tate (2012) Trauma in the Deaf Population: Definition, Experience, and Services. Alexandria, VA: National Association of State Mental Health Program Directors (NASMHPD)

Health Information/Health Literacy

- Some evidence that Deaf use Internet more but not able to effectively get health information
- Deaf are ~7 times more likely to have inadequate health literacy (*McKee et al., 2015*)
  - Information marginalization (e.g. irregular use of captioning or access to sign language videos)

Healthcare Navigation

- Communication breakdowns with providers (*Alexander, et al., 2012*)
  - Inconsistent interpreter coverage (~20% of the time)
  - Medications misunderstandings (33% did not understand instructions or took wrong dose of medications)
- Avoidance of primary care providers and overuse of ED (*McKee et al., 2015*)
  - Deaf use Emergency Department twice as often
- Medicaid (public insurance barriers)

Health Outcomes

- Providing accessible health care, Deaf health outcomes are improved
  - Improved receipt of preventive services and primary care services (*McKee, et al. 2010; MacKinney et al. 1995*)
  - Probable reduction of ED services (prelim data)
  - Improved mental health via telemedicine (prelim data)
- We need support for programs that are accessible for Deaf patients!

Disease Burden Disparity in the Deaf

- Maryland Dept. of Health found out that 4.3% of deaf have HIV/AIDS (vs ~1% for hearing)
  - Sources of sexual education is inconsistent and lacking in many cases
  - Yet risk factors for HIV are higher!
    - Substance abuse
    - Sex abuse
    - Higher number of sexual partners
    - Inaccessible health care for STD testing

Source: http://caps.ucsf.edu/archives/factsheets/deaf-person

Disease Burden for Individuals with moderate or worse hearing loss

Table 3. Odds Ratios for Health Outcomes of adults with hearing loss compared to adults with no hearing loss, by age group (NHIS 2011-2013)

	Hearing Loss versus No Hearing Loss		
	18-44	45-64	65+
Arthritis	3.57 (2.68-4.76)	2.21 (1.89-2.58)	1.40 (1.24-1.58)
Cardiovascular Disease	2.22 (1.50-3.27)	1.58 (1.32-1.90)	1.45 (1.28-1.64)
MCC	1.83 (1.29-2.60)	1.59 (1.35-1.88)	1.42 (1.21-1.67)
High Blood Pressure	2.04 (1.54-2.70)	1.35 (1.16-1.56)	1.35 (1.20-1.53)
Diabetes	2.15 (1.38-3.34)	1.34 (1.11-1.64)	1.20 (1.03-1.39)
Emphysema	2.19 (0.97-5.16)	2.78 (2.02-3.82)	1.16 (0.94-1.43)
Stroke	2.91 (1.93-4.34)	1.71 (1.26-2.32)	1.31 (1.09-1.59)
Cancer	1.31 (0.72-2.04)	1.31 (1.05-1.64)	1.25 (1.10-1.43)
Asthma	1.43 (1.03-2.00)	1.48 (1.19-1.83)	0.93(0.79-1.11)
Health Status (worse than last year)	2.17 (1.55-3.04)	1.92 (1.56-2.36)	1.70(1.45-1.99)
Fair/Poor Health	3.00 (1.91-4.73)	1.89 (1.54-2.32)	1.45 (1.25-1.66)
Overweight/obese	0.68 (0.52-0.89)	0.88 (0.74-1.05)	1.12 (0.99-1.27)

Table shows odds ratios and 95% confidence intervals from multivariate logistic regression analysis. Control variables: insurance status, sex, race/ethnicity, marital status, education, employment, region of residence, BMI>25, disability status

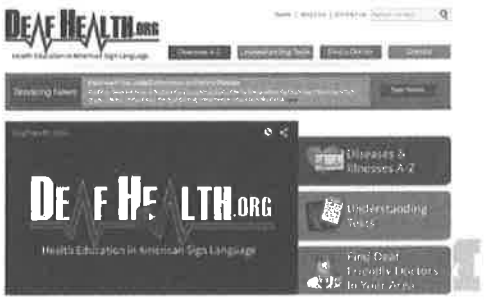
McKee & Reichard 2016 In review

Health Communication

Why should we care about accessible health care for Deaf?

- Improved adherence and medical outcomes
- Addressing patient concerns without use of further tests and treatments
- Better patient-provider satisfaction Reduced litigation
- Potential reduction in medical costs

Accessible Health Information



Navigators and Support Groups "Deaf Pinkies"

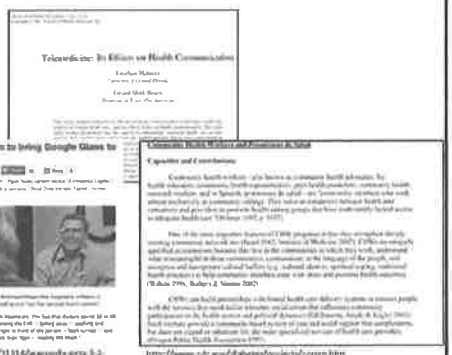
Minnesota film aims to help deaf women facing breast cancer

Euan Kerr - St. Paul, Minn. - Feb 11, 2011 — Arts & Culture

Learning you have breast cancer is never easy, but for members of the deaf community the diagnosis can be particularly isolating. Now a group of Minnesota film makers are trying to change that with a documentary called "Signing On."

Meyers, Buel, and Barnes

Future Directions



What is needed?

- ASL Fluent Community Health Workers
- Accessible mental health and hospice services
- Wellness programs
- Telemedicine
- Development of a Deaf health network to provide better state coverage

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